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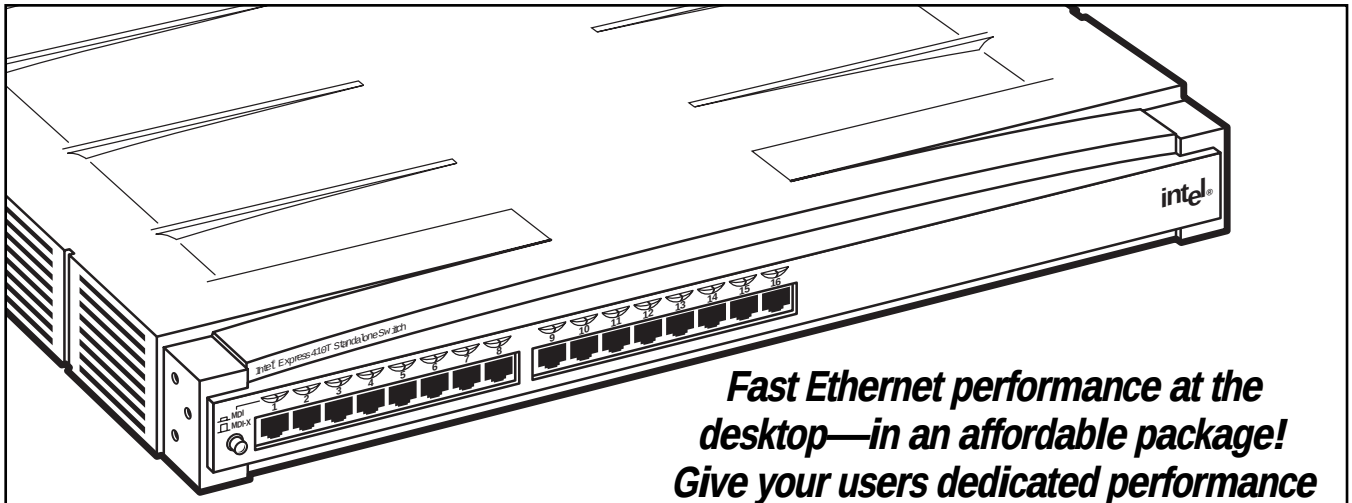
INTEL EXPRESS 410T STANDALONE SWITCH



Fast Ethernet performance at the desktop—in an affordable package! Give your users dedicated performance whether they're at 10 or 100 Mbps.

Key Features

- ***Each port matches speed, duplex, and flow control for 10- and 100-Mbps devices.***
- ***Affordably delivers switched performance to every desktop.***
- ***Quick setup with easy manual or auto-configuration.***
- ***Only 1U high! Perfect for tight spaces.***
- ***Delivers performance even during high traffic bursts.***
- ***Low price per port.***

The Intel® Express 410T Standalone Switch lets you migrate your workgroups from shared to switched networks and economically provide Fast Ethernet performance to your desktop users.

The switch combines high performance with affordability, giving you a low-cost way to migrate from shared to switched workgroups. It's most ideal for organizations looking for a simple yet powerful switch solution that's within budget.

The 410T is also your choice if you want to replace your hub with a reliable switch, but you're more concerned with reliability and ease of use than extensive management features.

Specifically, the Express 410T helps you increase network performance by allowing your users to connect at either 10 or 100 Mbps via a dedicated network connection. That means your users can access the switch at 100 Mbps without disrupting other network users. The switch is particularly helpful if you use demanding applications like CAD or multimedia programs.

Compatibility isn't a problem, either. The 410T works in any Ethernet/Fast Ethernet network configuration.

Available in 16- and 24-port versions, the 410T features 10/100 auto-negotiating ports that match speed, duplex, and flow control of all connected devices.

For devices that can't auto-negotiate, the switch lets you manage from a single source by manually configuring each switch port for speed, duplex, and flow control. Why bother with having to reconfigure each legacy device that's connected to your network?

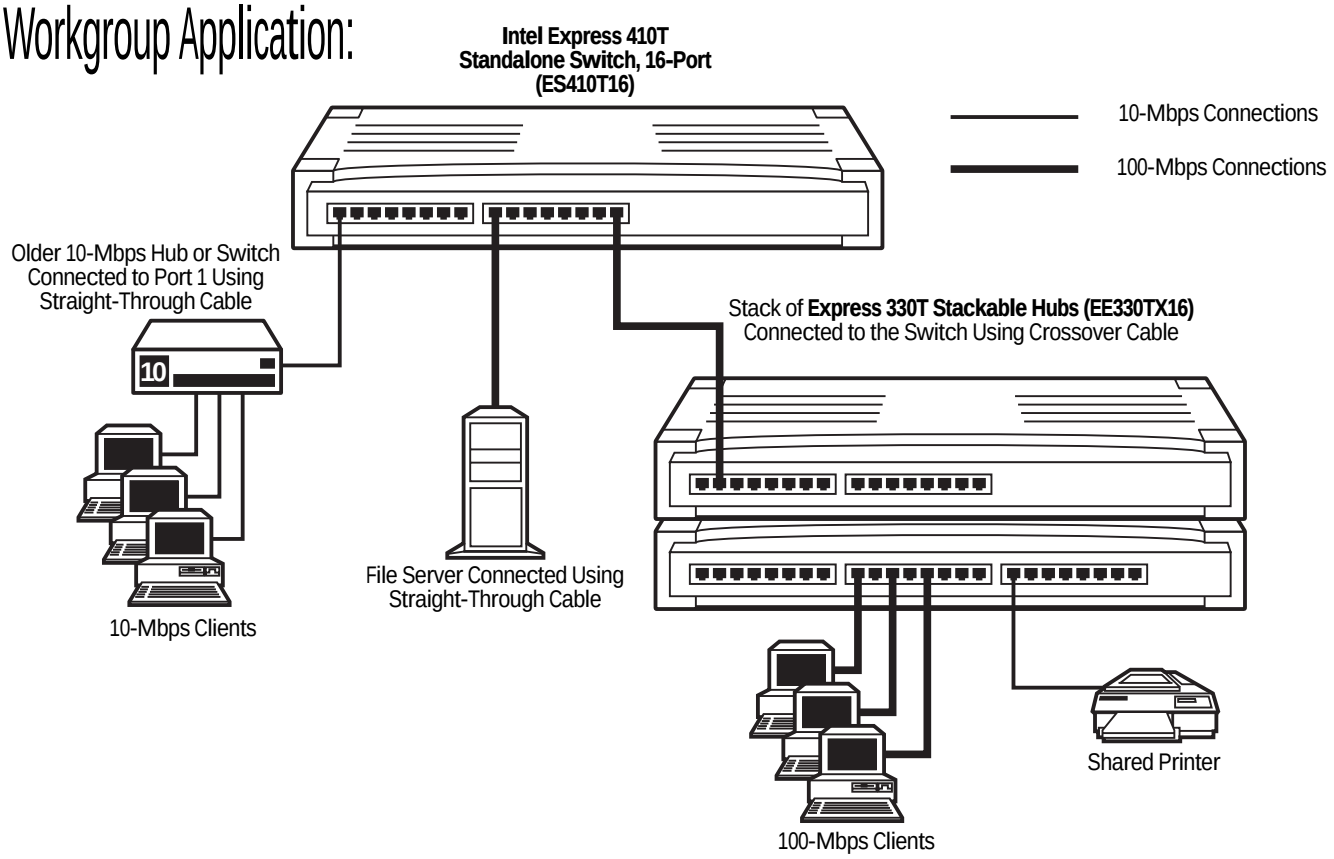
In addition to auto-negotiating ports, the 410T features auto-configuration and easy out-of-the-box setup. Connect it, plug it in, and quickly deliver switched performance to each user. It's that easy. Rackmounting brackets are included, too.

If you're tight on room, you'll appreciate the switch's streamlined design. It's only 1 rack unit (1U) high, so you can increase your port density without taking up much office space.

Connect PCs and print servers to the device with straight-through cable, and use crossover cable to connect the switch to another switch or hub. If you don't want to use crossover cable to link the devices, simply depress the crossover button on the 410T's front panel. This toggles Port 1 from MDI-X to MDI.

LEDs above each port indicate port status, individual port speed, and port activity.

Workgroup Application:



The Express 410T can serve as the backbone for a small network. Its MDI/MDI-X button allows the switch to connect to other switches and hubs using straight-through cables (instead of crossover cables). All ports on the switch are MDI-X, and the button is used to toggle Port 1 to MDI.

Technically Speaking

Compared with traditional routers and bridges, Ethernet switches offer distinct advantages in performance, ease of use, and cost.

In particular, an Intel® Express 410 Standalone Switch can help alleviate bottlenecks in your client/server environment. A workgroup-based switch such as the Express 410 takes a logical approach to easing congestion: It boosts performance on a portion of the network and divides the local network so fewer users occupy a segment.

The switch also provides each high-performance device (such a server or a switch uplink) with its own dedicated segment, one that can run at the same speed as the other switched ports or at higher speeds.

To further ease the flow of traffic, the Express 410T employs flow control, which temporarily suspends a transfer of data from a sending workstation until its destination port is ready to receive it. Flow control applied during Ethernet traffic bursts—when switch buffer memory is full—helps prevent information from being dropped and, in turn, saves you from costly delays.

Many conventional bridges, routers, and switches rely on large, expensive buffers to hold packets that can't be transmitted. However, if the destination segment becomes overloaded, incoming data can overrun the buffer, forcing the device to drop excess packets. And, although the sending nodes' NIC software detects dropped packets, the solution typically involves a very inefficient time-out mechanism.

Flow control goes to the source—before the segment is flooded. When a port's internal buffers near capacity, flow control enables the switch to transmit a mock collision (also known as a jam pattern) back to the source node. The sending node sees the interruption as a collision and backs off. When the switch has emptied its internal buffers, it directs the sender's NIC to retransmit the packet from its hardware buffers.

You can enable and disable flow control for each port on the Express 410T. By default, flow control is enabled. The method of flow control depends on whether the ports are set to full or half duplex. For instance, if the port is operating at full duplex, the switch sends out an 802.3x PAUSE frame, instead of a collision, to delay traffic.

And, as a store-and-forward switch, the 410T stores the incoming frame in an internal buffer and delays transmission until the switch successfully completes packet error-checking.

Specifications

Compliance — UL® listed (UL 1950/CSA 22.2-950), IEC 950, EN60950 (CE)

Standards — Ethernet (IEEE 802.3), Fast Ethernet (IEEE 802.3u), flow control (IEEE 802.3x)

MAC Addresses — 12,000

Speed — Per port: 10/100 auto-negotiating

Duplex — Per port: Half/full auto-negotiating

Forwarding Mode — Store and forward

Flow Control — Half duplex: Back pressure; Full duplex: IEEE 802.3x

Distance — Maximum cabling: Category 5 shielded/unshielded UTP cable: 328 ft. (100 m)

Connectors — 10/100BASE-TX ports: RJ-45; Console: RS-232/DB9 M

Indicators — (7) LEDs: (3) Status: Power-Up, Diagnostic, Operating Normal; (4) Per port: Traffic, Link, Collision, Speed

Power — 90–130/180–240 VAC, autosensing

Temperature — Operating: 41 to 104°F (5 to 40°C); Storage: -13 to +158°F (-25 to +70°C)

Humidity — 10 to 85% non-condensing

Size — 1.7"H x 17.4"W x 13"D (4.3 x 44.2 x 33 cm)

Weight — 8 lb. (3.6 kg)

The 410T Standalone Switch Includes:

- Intel Express 410T Standalone Switch
- Quick-start guide
- Rackmounting brackets and hardware
- DB9 F-F 6-ft. (1.8-m) serial cross-pinned cable for port configuration

Ordering Information

ITEM	CODE
Intel Express 410T Standalone Switch	
16 Port	ES410T16
24 Port	ES410T24
For optimum performance and savings, also order…	
Category 5 Patch Cable, 100-MHz, 4-Pair, Straight-Pinned, PVC, Beige,	
10-ft. (3.0-m)	EVMSL05-0010
20-ft. (6.0-m)	EVMSL05-0020
50-ft. (15.2-m)	EVMSL05-0050
100-ft. (30.4-m)	EVMSL05-0100
Custom Lengths	EVMSL05
For other lengths or colors…call us!	
To use the switch as a backbone, you might need an…	
Intel Express 330T Stackable Hub	
16-Port	EE330TX16
24-Port	EE330TX24
For details, request Faxback No. 23056 or call us!	
We have many hub types and sizes available.	
If you need crossover cable for the backbone, order…	
Category 5 Crossover Cable, 100-MHz, 4-Pair, 568B, Beige,	
1-ft. (0.3-m)	EVCRB05-001
3-ft. (0.9-m)	EVCRB05-003
6-ft. (1.8-m)	EVCRB05-006
10-ft. (3.0-m)	EVCRB05-010
20-ft. (6.0-m)	EVCRB05-020
Custom Lengths	EVCRB05
For other colors…call us!	

Black Box offers the best warranty program in the industry—Fido Protection℠. For more information, request **FaxBack 22512**.